
1 INTRODUCTION

The Idaho Transportation Department (ITD) proposes to reconstruct existing lanes, add new lanes, and reconstruct interchanges to meet level of service (LOS) E operations between the west end of the Orchard Street interchange and the east end of the Eisenmann Road interchange on Interstate 84 (I-84). The purpose of this environmental assessment is to document any known and potential beneficial effects and adverse impacts the project could have upon the natural and built environment near the project area.

1.1 PROJECT LOCATION

The proposed project is located in Ada County in southwestern Idaho on a 9.2-mile segment of I-84 that extends from the west of the Orchard Street interchange to the Eisenmann Road interchange. The majority of the project area is situated along the southern edge of Boise and a portion of the area extends south and east into unincorporated Ada County. Figure 1.1 shows the project vicinity and location, and Figure 1.2 shows the project area.

The segment of I-84 within the project area consists of two eastbound lanes and two westbound lanes separated by an unpaved median. The project area includes five grade-separated, conventional diamond type interchanges located at Orchard Street, Vista Avenue, Broadway Avenue, Gowen Road and Eisenmann Road.

1.2 PURPOSE AND NEED

1.2.1 Purpose

The purpose of the proposed action is to increase capacity, improve traffic operation performance and pavement condition on Interstate 84 between mileposts 50.7 and 59.9.

1.2.2 Proposed Action

The proposed action is located in Ada County, Idaho and is approximately nine miles long. It begins approximately one half mile west of the Orchard interchange and ends at east of the Eisenmann Road interchange (Isaac's Canyon). This action provides for the "ultimate build-out" of this corridor to provide an acceptable level of service for the design year of 2035.

The ultimate build out plan includes the following:

- Expansion of the existing 4-lane facility to eight lanes from just west of Orchard Street to Broadway Avenue.
- Addition of auxiliary lanes between the Orchard Street, Vista Avenue, and Broadway Avenue interchange on and off ramps.

- Expansion of the existing 4-lane facility to six lanes from Broadway Avenue to Gowen Road.
- Reconstruction of the Orchard Street, Vista Avenue, Broadway Avenue and Gowen Road interchanges.
- Reconstruction of the existing 4-lane facility from Gowen Road to Eisenmann Road (Isaac's Canyon).
- Construction of noise barrier walls adjacent to residential properties along the northern right-of-way from just west of Orchard Street to Broadway Avenue.
- Construction of storm drainage facilities consisting of an underground storm water collection system and storm water retention ponds.

1.2.3 Need

Improvements to this segment of I-84 are needed due to inadequate capacity to support forecast transportation demand and to relieve current and projected traffic congestion.

I-84 currently carries 75,000 vehicles per day, which exceeds the planning threshold of 70,000 vehicles per day. The interstate and four of the interchanges (Orchard, Vista, Broadway, and Gowen) will require widening and other improvements to meet the growing travel demands in the corridor. The Year 2035 traffic volumes are forecast to be as high as 151,000 vehicles per day. These volumes indicate that the Year 2035 traffic volumes will far exceed the operational capacity of the existing roadway system. The existing Orchard, Vista, Broadway, and Gowen interchanges will operate at LOS F if no improvements are made.

A safety analysis performed for the corridor divided the entire length into segments primarily bound by the interchanges. Several portions of the interstate were found to be not as safe as other average similarly classified roadways in the State of Idaho, as shown in Table 1.1.

Table 1.1. Accident Rates

Segment Not As Safe as Other Similar Roads in Idaho	Accident Rate	Baseline Accident Rate	Proposed Action Reduce the Accident Rate below Baseline
Eastbound Cole to Orchard	0.88	0.60	Yes
Westbound Eisenman to Gowen	0.79	0.60	Yes
Westbound Broadway to Vista	0.94	0.62	Yes
Westbound Vista to Orchard	0.79	0.62	Yes

The proposed action, by increasing capacity of the interstate, would reduce the accident rates for each of these roadway segments, making them as safe as or safer than the average similarly classified roadways in the State of Idaho.

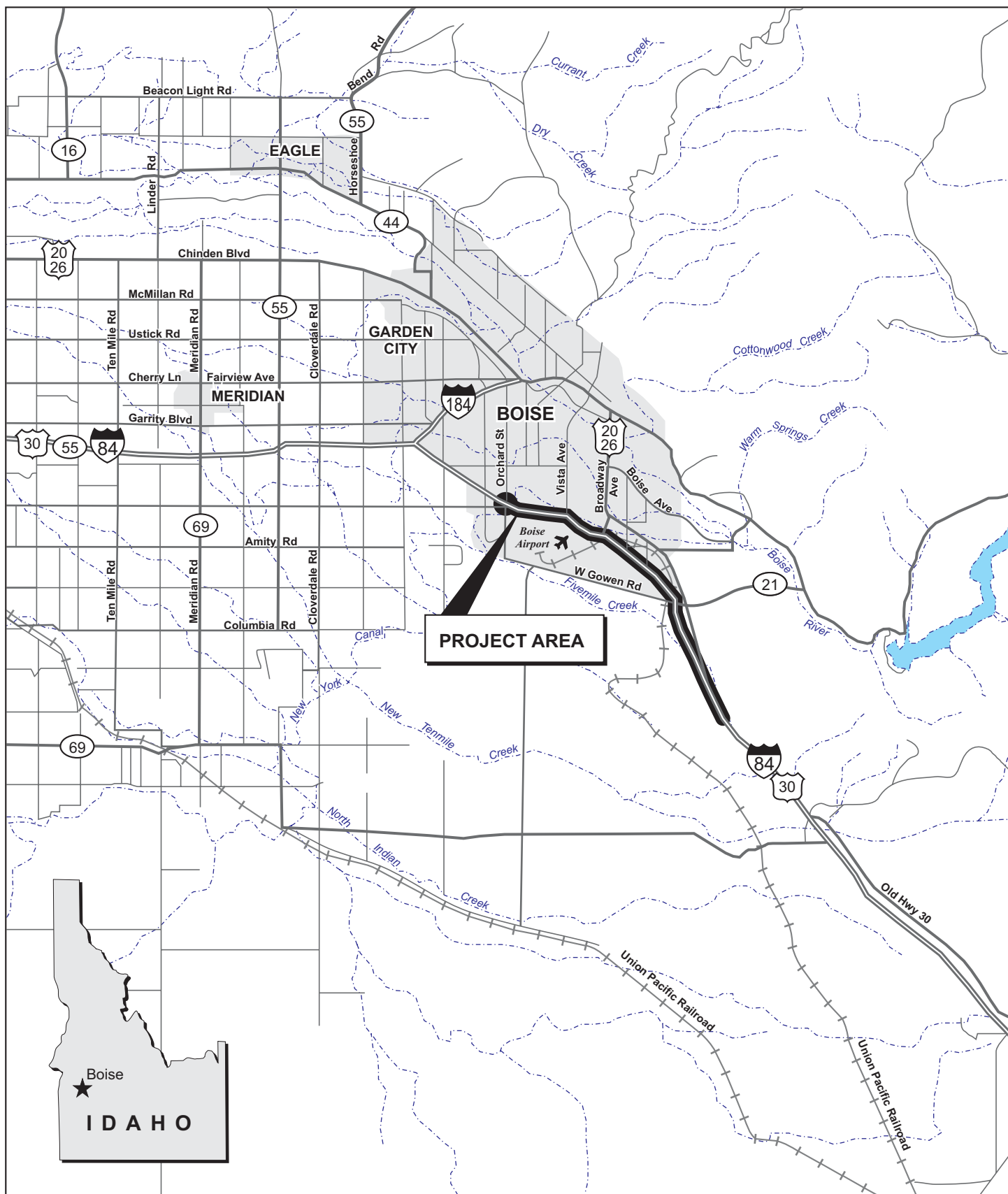


Figure 1.1
Project Vicinity and Location



ITD Project No.

NH-STP-84-2(051)51

Key No.

6492

I-84, Orchard I.C. to Gowen I.C.

June 2007

LEGEND

City Limits

Project Area

Streams and Canals

Railroad

Interstate

U.S. Highway

State Highway

Other Roads



Scale
1 : 200,000

Source Info: Idaho Atlas and Gazetteer, 1998.

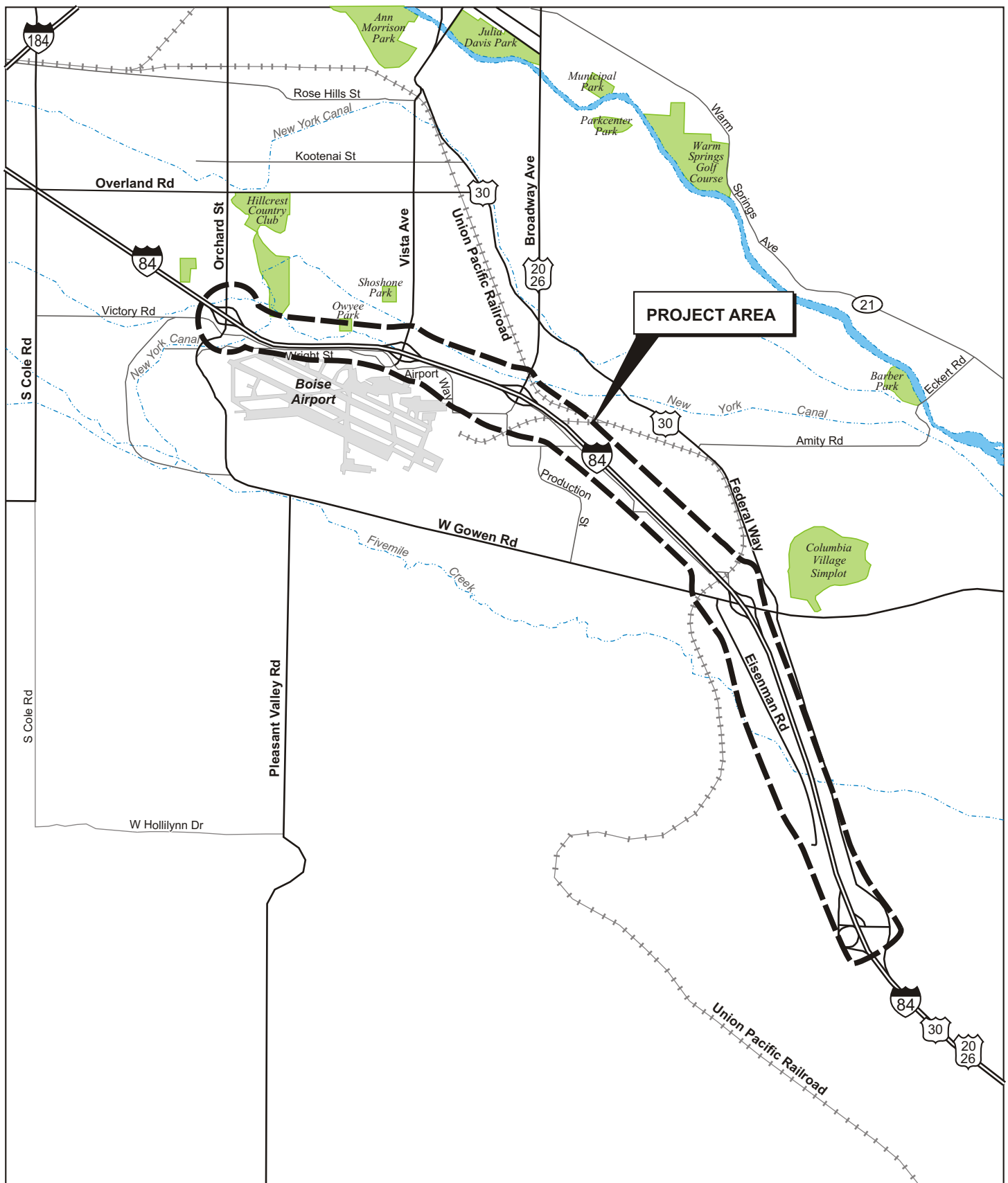


Figure 1.2
Project Area



ITD Project No.

NH-STP-84-2(051)51

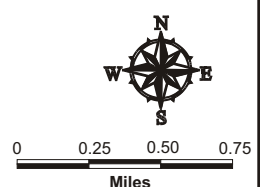
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LEGEND

- U.S. Interstate
- Main Roads
- Other Roads
- Rivers/Canals
- Parks



Source: Rand McNally, Boise Nampa/Caldwell, Idaho.
Local Street Detail, 2003.

The current roadway and bridges do not meet current design standards. The Orchard, Vista, and Broadway interchanges cross over I-84 and were constructed with 50-foot spans. These spans are not adequate to accommodate the number of proposed interstate lanes required to provide the necessary capacity for 2035 traffic volumes. The Gowen Road structures only provide width for two lanes each direction for the interstate crossing over Gowen Road. The merge and exit tapers and the bridge structures will also be redesigned to correct their current substandard conditions.

Pavement along I-84 is also approaching the end of its useful condition. The interstate was constructed in the late 1960's and was designed for an average daily traffic volume of approximately 16,000 vehicles. This pavement is experiencing traffic volumes and highway loads that far exceed the parameters used for its design. The pavement has experienced significant increases in cracking, roughness, and rutting in the last decade.

1.3 I-84 TRANSPORTATION SYSTEM DEFICIENCIES

I-84 is the major east-west highway link in Southwestern Idaho. The *Interstate 84-Orchard Street to Eisenmann Road Traffic Analysis* (July 2003) indicated that the forecast Year 2035 design hour traffic volumes would far exceed the operational capacity of I-84 and not meet ITD's urban interstate LOS standards.

Capacity is ranked using a letter system that identifies the level of service (LOS) along the segment of road. LOS is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Letters designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. Traditionally, a facility is considered to have reached capacity at LOS E. Each level of service represents a range of operating conditions and the driver's perception of those conditions. Safety is not included in the measures that establish service levels

The planning thresholds for the interstate mainline are an average daily traffic (ADT) two-way volume of 70,000 vehicles per day (vpd) and a LOS D mobility standard. Existing traffic volumes on the segment of I-84 within the project area already exceed the operational thresholds of the existing roadway system, currently carrying 75,000 vehicles per day. The Year 2035 traffic volumes within the project area are forecast to be as high as 151,000 vehicles per day. The mainline freeway from just west of Orchard Street to the Gowen Road interchange, and four of the interchanges (Orchard Street, Vista Avenue, Broadway Avenue and Gowen Road) in the project area would require widening to accommodate additional vehicular travel and auxiliary lanes, and other improvements to meet the growing travel demands on I-84. The mainline freeway from the Gowen Road interchange to the Eisenmann Road interchange would not require widening, but will be upgraded with new pavement.

